General

Guideline Title

Assessing heart failure in long term care facilities.

Bibliographic Source(s)

Harrington C. Assessing heart failure in long term care facilities. Iowa City (IA): University of Iowa College of Nursing, John A. Hartford Foundation Center of Geriatric Nursing Excellence; 2012. 40 p. [44 references]

Guideline Status

This is the current release of the guideline.

This guideline updates a previous version: Harrington C. Assessing heart failure in long term care facilities. Iowa City (IA): University of Iowa Gerontological Nursing Interventions Research Center, Research Translation and Dissemination Core; 2006 Oct. 36 p. [30 references]

Recommendations

Major Recommendations

The grades of evidence (A1, A2, B1, B2, C1, C2, D) are defined at the end of the "Major Recommendations" field.

Assessment

Admission assessment by a registered nurse using the long term care (LTC) Heart Failure Assessment tool (see Appendix A.1 in the original guideline document) is recommended for baseline documentation for patients with:

- Documented diagnosis of heart failure (HF), any cardiac diagnosis, hypertension, chronic kidney disease, or diabetes in the health record.
- Echocardiogram results suggestive of heart failure with reduced or preserved left ventricular ejection fraction. Any Minimum Data Set 3.0 that triggers a need for assessment by documentation of a new diagnosis of HF for cardiomyopathy or presence of respiratory, cardiac, or functional decline.

The admission nurse should consult with the primary care provider and obtain an order to initiate the HF guideline for long-term care residents who meet any of the above criteria and add the resident to the scheduled interdisciplinary team meetings for care plan update.

Use of the LTC Heart Failure Assessment tool

The LTC Heart Failure Assessment tool is composed of two profiles that address three components of activities of daily living (ADL) and eleven components of dyspnea. The assessing nurse observes for decline in the resident's functional status and positive responses to questions in the dyspnea profile.

- The registered nurse documents the patient's status for the components in the ADL Profile on admission and at four week intervals.
- The higher the score in the ADL profile, the lower the level of function. This score is compared with previous section totals at each assessment interval monitoring for deterioration in functional status over time.
- The nurse then assesses the Dyspnea Profile. Any positive response in this section should trigger an immediate referral to the primary care provider for evaluation (Evidence Grade = C1).
- If the responses in the dyspnea section are negative, the nurse should refer to the interdisciplinary team to assess for other causes in resident decline and schedule a visit with the primary care provider (Evidence Grade = C1).

Each direct caregiver (certified nursing assistant) will:

- Be given "A NEW LEAF" card (see Appendix A.3 in the original guideline document).
- Screen residents during the provision of care on a daily basis (Evidence Grade = C1).
- Notify the primary nurse if any signs or symptoms are present and provide current vital signs and the weight graphic (Evidence Grade = C1).

The assessment nurse will then:

- Perform an assessment using the LTC Heart Failure Assessment tool and contact the primary care provider for evaluation if positive findings of possible heart failure exacerbation are detected. This includes observation of:
  - Respiratory effort
  - Bulging neck veins
  - Extremity edema
  - Auscultation of anterior and posterior breath sounds
  - Heart sounds listening for extra heart sounds and/or irregularity of rhythm
- Make available for the provider the vital signs (blood pressure, pulse, respiration, and pulse oximetry) and weight graphic.
- Continue to monitor vital signs according to the primary provider's discretion or the long-term care facility's procedure and policy.

Interventions

Weight Monitoring

- Residents are placed on a weight regimen by the nursing staff. Weights are obtained three times until the resident's weight has been evaluated as stable as defined by a weight gain of less than two pounds for three measurements to maintain weight within shaded area on weight graphic (Evidence Grade = C1). Weight is graphed on a weight graphic (see Appendix A, Example 2 in the original guideline document).
- Any weight gain of more than two pounds triggers:
  1. An assessment using the LTC Heart Failure Assessment tool.
  2. Vital signs with oxygen saturation (Evidence Grade = C1).
  3. Notification of the resident's primary care provider (Evidence Grade = C1)
- After the weight is stable, the resident is then weighed every week at the same time of day, with the same scale, and similar clothing (Evidence Grade = C1).
- If the resident's weight registers outside the shaded area in the four week period on the weight flow sheet, HF assessment is triggered and the primary care provider should be notified.

Dietary Management

Include dietary measures to control exacerbation of symptoms:

- Reduction in fluid intake in patients with symptomatic advanced heart failure (American College of Cardiology/American Heart Association [ACC/AHA] Grade III, IV) (Evidence Grade=D).
- Use of herbal seasonings should be encouraged in lieu of salt or potassium based salt substitutes (Evidence Grade = D).
- Reduced sodium diet. (Evidence Grade = D).
- Registered dieticians consult upon initiation of the guideline.

Immunizations

- Influenza vaccines given every fall if not contraindicated.
- Pneumococcal vaccines given as recommended based on current Center for Disease Control (CDC) recommendations if not

contraindicated. Vaccinations are recommended to prevent respiratory infections which may be detrimental to heart failure patients (Evidence Grade = A1).

Exercise

- Weight reduction should be included in the treatment of obese chronic heart failure patients (Evidence Grade = D).
- Exercise should be encouraged in the stable heart failure patient within the limits of the severity of disease.
- The resident should be encouraged to carry out activities of daily living and leisure activities that do not induce HF symptoms (Evidence Grade = D).

Education

- Patient and family education should be provided on topics related to heart failure (Evidence Grade = C1).
- Smoking should always be discouraged. The use of smoking cessation aids such as nicotine replacement therapies should be actively encouraged (Evidence Grade = B1).
- Patients and families should be taught the rationale for prescriber avoidance of nonsteroidal anti-inflammatory drugs due to their deleterious effects on renal and cardiac function. Nursing staff should be alert to avoid administering them to residents with cardiovascular disease (Evidence Grade = A1).
- Alcohol intake should be discouraged in patients with severe heart failure. (Evidence Grade = D).

Definitions:

Grades of Evidence

A1 = Evidence from well-designed meta-analysis or well-done systematic review with results that consistently support a specific action (e.g. assessment), intervention, or treatment

A2 = Evidence from one or more randomized controlled trials with consistent results

B1 = Evidence from high quality evidence-based practice guideline

B2 = Evidence from quasi experimental trials with consistent results

C1 = Evidence from observational studies with consistent results (e.g. correlational, descriptive studies)

C2 = Evidence observational studies or controlled trials with inconsistent results

D = Evidence from expert opinion, multiple case reports, or national consensus reports

Clinical Algorithm(s)

A clinical algorithm is provided in Appendix F of the original guideline document titled, "Non-Pharmacologic Management of Heart Failure in Long Term Care."

Scope

Disease/Condition(s)

Heart failure

Guideline Category

Diagnosis

Evaluation

Management

Prevention

Risk Assessment

Treatment

Clinical Specialty

Cardiology

Family Practice

Geriatrics

Internal Medicine

Nursing

Intended Users

Advanced Practice Nurses

Allied Health Personnel

Health Care Providers

Nurses

Physician Assistants

Physicians

Guideline Objective(s)

To outline a systematic approach for the assessment of heart failure and the early recognition of symptoms of worsening heart failure in the long-term care setting, post-acute care units, and short-term rehabilitation units using taught observation skills of direct caregivers

Target Population

- Geriatric patients in long-term care settings with classification I, II, III, or IV heart failure according to the New York Heart Association (NYHA) criteria (see appendix E in the original guideline document)
- Geriatric patients who have known risk factors for HF should be evaluated using a systematic approach as described in this clinical practice guideline. Risk factors include chronic conditions such as:
    - coronary artery disease
    - diabetes, hypertension
    - myocardial ischemia
    - previous diagnosis of heart failure
    - myocardial infarction
    - left ventricular dysfunction
    - cardiomyopathy

Interventions and Practices Considered

Evaluation

Admission assessment by a registered nurse using the long term care (LTC) Heart Failure Assessment Tool

Treatment

- Weight monitoring
- Dietary management
- Immunizations
- Encourage exercise
- Patient and family education

Major Outcomes Considered

- Heart failure hospitalizations or emergency room visits
- Quality of life and functional status as indicated by scores on the minimum data set or Minnesota Living with Heart Failure Questionnaire (requires site license, go to http://www.license.umn.edu/Products/Minnesota-Living-With-Heart-Failure-Questionnaire__Z94019.aspx) (Appendix G)
- Number of clinical exacerbations of heart failure
- Symptom management
- Disease progression

Methodology

Methods Used to Collect/Select the Evidence

Hand-searches of Published Literature (Primary Sources)

Hand-searches of Published Literature (Secondary Sources)

Searches of Electronic Databases

Description of Methods Used to Collect/Select the Evidence

Databases

An exhaustive literature review was conducted using the University of Iowa Gerontological Nursing Interventions Research Center's conceptual model for evidence-based guidelines. The review included research studies, non-research literature, and national clinical practice guidelines. The searches were conducted for the years 1999-2011 using PubMed, Ovid, CINAHL, EBSCO, ProQuest, MEDLINE, and the Agency for Health Research and Quality databases. Hand searches were then performed of all reference lists of relevant studies or non-research based literature. Although dates of relevant studies were within the time frame specified, they were few in number; therefore, the primary sources were found and reviewed regardless of age.

Inclusion and Exclusion Criteria

Criteria for inclusion for research literature included studies published within the specified timeframe; conducted at nursing home facilities; described the symptoms of exacerbation and hospitalization of residents with heart failure, or addressed the primary diagnosis of heart failure. Non-research based literature was used to obtain the most relevant signs and symptoms of heart failure. In addition, studies that evaluated efficacy of certified nursing assistants in the long-term care setting, and studies that examined effective performance and outcome measures to reduce or eliminate premature and avoidable heart failure hospitalizations were searched. Only published sources written in English were used.

Keywords

The MeSH database was searched using: (("Heart Failure"[MeSH] OR "Heart Failure, Diastolic"[MeSH] OR "Heart Failure, Systolic"[MeSH])) OR ("Heart Failure"[MeSH] OR "Heart Failure, Diastolic"[MeSH] OR "Heart Failure, Systolic"[MeSH]))) AND "nursing"[Subheading] AND ("last 10 years"[PDat] AND (Humans[MeSH]) AND (English[lang]) AND (Clinical Trial[ptyp] OR Meta-Analysis[ptyp] OR Practice

Guideline[ptyp] OR Randomized Controlled Trial[ptyp] OR Review[ptyp] OR Case Reports[ptyp] OR Classical Article[ptyp]) AND (aged[MeSH] OR aged, 80 and over[MeSH])). Keyword search terms included: "congestive heart failure," "heart failure," "chronic heart failure," "certified nursing assistant," "nursing," "nursing home," "skilled nursing facility," "long term care facility," "geriatric mortality," "nursing home patients," and "extended care facility," "congestive heart failure: mortality, complications, and diagnosis" combined with "aged 80 and over" and "aged."

Number of Source Documents

One hundred eighty-five published articles or studies were found and reviewed based on inclusion criteria. Forty-four documents were used. Four of seven studies used as evidence to support the original clinical practice guideline remained relevant and were retained.

Methods Used to Assess the Quality and Strength of the Evidence

Weighting According to a Rating Scheme (Scheme Given)

Rating Scheme for the Strength of the Evidence

Grades of Evidence

A1 = Evidence from well-designed meta-analysis or well-done systematic review with results that consistently support a specific action (e.g. assessment), intervention, or treatment

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B1 = Evidence from high quality evidence-based practice guideline

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C1 = Evidence from observational studies with consistent results (e.g. correlational, descriptive studies)

C2 = Evidence observational studies or controlled trials with inconsistent results

D = Evidence from expert opinion, multiple case reports, or national consensus reports

Methods Used to Analyze the Evidence

Systematic Review

Description of the Methods Used to Analyze the Evidence

Not stated

Methods Used to Formulate the Recommendations

Expert Consensus

Description of Methods Used to Formulate the Recommendations

Experts in the subject of the proposed guideline are selected by the Research Translation and Dissemination Core to examine available research and write the guideline. Authors are given guidelines for performance of the systematic review of the evidence and in critiquing and weighing the strength of evidence.

Rating Scheme for the Strength of the Recommendations

Not applicable

Cost Analysis

A formal cost analysis was not performed and published cost analyses were not reviewed.

Method of Guideline Validation

External Peer Review

Internal Peer Review

Description of Method of Guideline Validation

Two experts knowledgeable about research on elders with heart failure who reside in long-term care settings reviewed this guideline. The reviewers suggested additional evidence and changes in the guideline to enhance its clinical usefulness.

Evidence Supporting the Recommendations

Type of Evidence Supporting the Recommendations

The type of supporting evidence is identified and graded for selected recommendations (see the "Major Recommendations" field).

Benefits/Harms of Implementing the Guideline Recommendations

Potential Benefits

- Decreased hospitalization and emergency room visits due to heart failure
- Improved quality of life
- Decreased exacerbation rate
- Symptom management
- Disease progression improvement

Potential Harms

Not stated

Implementation of the Guideline

Description of Implementation Strategy

The "Evaluation of Process and Outcomes" section and the appendices of the original document contain a complete description of implementation strategies.

Implementation Tools

Audit Criteria/Indicators

Chart Documentation/Checklists/Forms

Clinical Algorithm

Resources

For information about availability, see the *Availability of Companion Documents* and *Patient Resources* fields below.

Institute of Medicine (IOM) National Healthcare Quality Report Categories

IOM Care Need

Living with Illness

Staying Healthy

IOM Domain

Effectiveness

Patient-centeredness

Identifying Information and Availability

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Adaptation

Not applicable: The guideline was not adapted from another source.

Date Released

2006 Oct (revised 2012)

Guideline Developer(s)

University of Iowa College of Nursing, John A. Hartford Foundation Center of Geriatric Nursing Excellence - Academic Institution

Source(s) of Funding

Not stated

Guideline Committee

Guideline Committee

Composition of Group That Authored the Guideline

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Financial Disclosures/Conflicts of Interest

Not stated

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Guideline Availability

Electronic copies: Available for purchase on CD-ROM through The University of Iowa College of Nursing's John A. Hartford Center for Geriatric Excellence Web site .

Print copies: Available for purchase through The University of Iowa College of Nursing's John A. Hartford Center for Geriatric Excellence Web site .

Availability of Companion Documents

The following is available:

- Titler MG, Adams S. Guidelines for writing evidence-based guidelines. Iowa City (Iowa). Iowa City: University of Iowa College of Nursing, Gerontological Nursing Interventions Research Center, Research Translation and Dissemination Core. 2005.

Print copies: Available for purchase from The University of Iowa College of Nursing's John A. Hartford Center for Geriatric Excellence Web site .

In addition, process and outcome factors are available in the original guideline document.

The appendices to the original guideline document contain various forms and assessment tools, such as the long term care heart failure knowledge assessment test, Minnesota living with heart failure questionnaire, and process and outcome evaluation monitors.

Patient Resources

None available

NGC Status

This summary was completed by ECRI on February 6, 2007. The information was verified by the guideline developer on February 21, 2007. This NGC summary was updated by ECRI Institute on August 22, 2012.

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